DIGITAL WEATHER FORECASTER WITH IN-OUT THERMO-HYGROMETER

MODEL : BAA913HG

USER'S MANUAL

INTRODUCTION

Congratulations on your purchase of the BAA913HG Digital Weather Forecaster with In-Out Thermo-Hygrometer.The BAA913HG is an all-in-one weather forecasting device and clock.

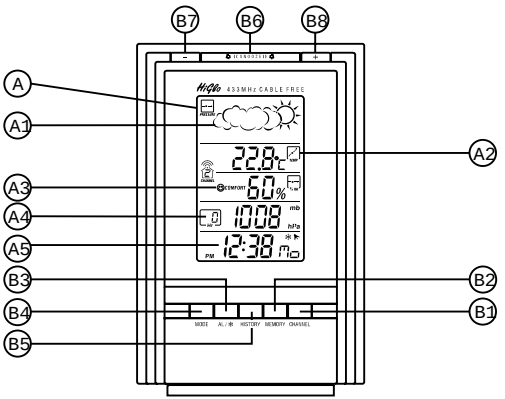
The BAA913HG, a weather forecasting device, has several weather related functions. A main feature is that it takes and records temperatures and humidities in more than one location. Using a wireless remote thermo-hygro sensor, it can simultaneously monitor temperatures and humidities in three remote locations. The unit will show temperature and humidity trends as well as record maximum and minimum temperature and humidity readings. BAA913HG is able to receive and display readings from up to 3 remote sensors.

As part of the weather forecasting function, the unit has a built-in barometer that displays atmospheric pressure. Using animated graphics, the unit displays atmospheric pressure trends and displays forecasts as sunny, partly cloudy, rainy and snowy.

Other features of the BAA913HG include backlight, extra-large liquid crystal display (LCD) and a daily crescendo alarm with an eight minute snooze function.

No wire installation is required between the main and remote units as the BAA913HG operates at 433 MHz.

MAIN FEATURES: MAIN UNIT



A. FRONT DISPLAY

The LCD is divided into five easy-to-read sections. Each section has a specific purpose that relates to weather forecasting, temperature, humidity, pressure and clock / calendar / alarm functions.

A1. WEATHER FORECAST WINDOW

- Graphically illustrates a weather forecast
- Indicates trends in atmospheric pressure
- Indicates when main unit battery is low

A2. TEMPERATURE WINDOW

- Displays current, minimum or maximum indoor and remote temperature
- Indicates temperature trend

A3. HUMIDITY WINDOW

- Displays current, minimum or maximum indoor and remote humidity
- Indicates humidity trend
- Displays the Comfort Level
- Indicates when the battery of the remote sensor in display is low

A4. ATMOSPHERIC PRESSURE

- Displays the current or historical (last 24 hours) barometric reading

A5. TIME/DATE/ALARM WINDOW

- Displays the current time, date (day, month, and year), daily alarm or Pre-alarm function

B. CONTROL BUTTONS

B1. [CHANNEL] BUTTON

Displays the temperature and humidity readings of the indoor or remote sensor

B2. [MEMORY] BUTTON

Displays minimum and maximum temperature and humidity readings, and erases memory data

B3. [AL / ✻] BUTTON

Displays the daily alarm time and Pre-alarm time period, or changes the corresponding alarm time

B4. [MODE] BUTTON

Changes the display mode of the clock, and alters time/date setting

B5. [HISTORY] BUTTON

Displays the barometric reading for the last 24 hours, or enter the altitude compensation setting

B6. [☼ ((SNOOZE)) ☼] BAR

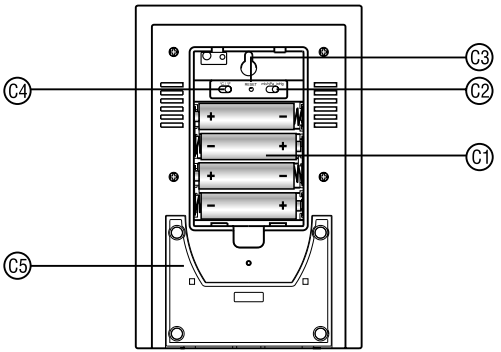
Activates the snooze function or turns on the backlight

B7 & B8. UP(+) DOWN(-) BUTTONS

Increases (+) or decreases (-) the value of a setting respectively

913hg-e.p65 2 04/30/2002, 5:59 PM

C. BACK PANEL



C1. BATTERY COMPARTMENT
Accommodates four UM-3 or "AA" size batteries

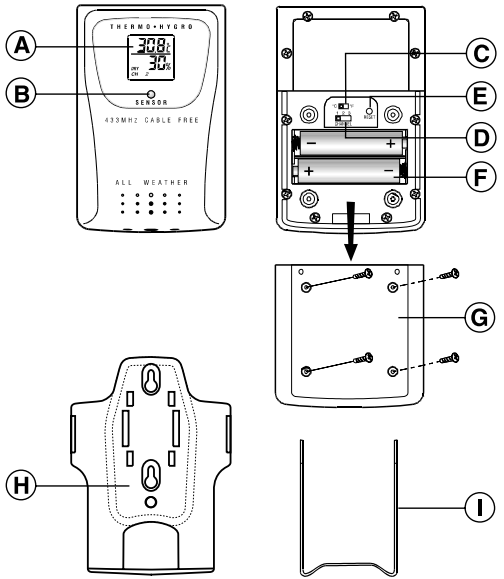
C2. mb / hPa - inHg SLIDE SWITCH
Selects between "mb / hPa" or "inHg" pressure unit display

C3. RESET SLOT
Resets the unit by returning all settings to their default values

C4. °C/°F SLIDE SWITCH
Selects between Centigrade (°C) or Fahrenheit (°F) temperature unit display

C5. RETRACTABLE TABLE STAND
Easy-open table stand with lock

FEATURES: REMOTE THERMO-HYGRO SENSOR



A. TWO-LINE LCD
Displays the current temperature and humidity monitored by the remote unit

B. LED INDICATOR
Flashes when the remote unit transmits a reading

C. °C/°F SLIDE SWITCH
Selects between Centigrade (°C) and Fahrenheit (°F)

D. CHANNEL SLIDE SWITCH
Designates the remote unit Channel 1, Channel 2 or Channel 3

E. RESET
Returns all settings to default values

F. BATTERY COMPARTMENT
Accommodates two UM-4 or "AAA"-size batteries

G. BATTERY DOOR

H. WALL-MOUNT HOLDER
Supports the remote unit in wall-mounting

I. REMOVABLE TABLE STAND
For standing the remote unit on a flat surface

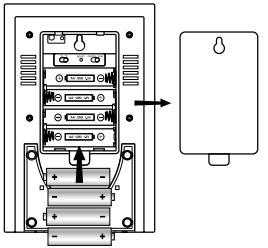
BEFORE YOU BEGIN

For best operation:

1. Insert batteries for the remote unit first. Then proceed with inserting the batteries for the main unit.
2. Position the remote unit and the main unit within effective transmission range. In usual circumstances, the effective range is 30 meters.
3. Though the remote unit is weather proof, it should be placed away form direct sunlight, rain or snow.

BATTERY INSTALLATION: MAIN UNIT

1. Gently lift the tab on the battery compartment door.
2. Insert four UM-3 or "AA" size batteries.



3. Replace the battery compartment door.

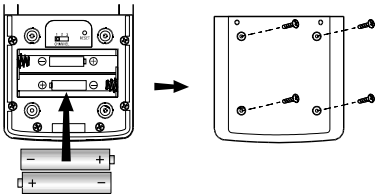
BATTERY AND CHANNEL INSTALLATION: REMOTE UNIT

The remote thermo-hygro sensor unit uses two (2) UM-4 or "AAA" size batteries.

Follow these steps to install / replace batteries:

1. Remove the screws on the battery compartment.
2. Select the channel number on the **[CHANNEL]** slide switch.
3. Select the temperature display unit on the °C/°F slide switch.

913hg-e.p65 4 04/30/2002, 5:59 PM



4. Insert the batteries strictly according to the polarities shown therein.
5. Replace the battery compartment door and secure its screws.

Replace the batteries when the low-battery indicator of the particular channel lights up on the display. (Repeat the steps described in section "BEFORE YOU BEGIN")

Note :Once a channel is assigned to a remote unit, you can only change it by removing the batteries or resetting the unit.

HOW TO USE THE BACKLIGHT

Press **[** ☼ ((SNOOZE)) ☼ **]** bar once. The backlight will be activated for five seconds.

HOW TO SET THE CLOCK

Press **MODE** and hold for three seconds. The 12-hr value will flash. Use the **UP(+)** or **DOWN(-)** buttons to make a selection between a twenty-four hour display and a twelve hour display.

Press **MODE** again, the hour will flash. Use the **UP(+)** or **DOWN (-)** button to enter the hours. Holding down either the up or down position will increase or decrease the value rapidly.

Press **MODE** again, the minute will flash. Again, use the **UP(+)** or **DOWN(-)** button to change the minutes.

Note: When changes are made to this setting, the seconds will start from zero.

Press **MODE** again, the calendar settings are displayed and the year is flashing. Use the **UP(+)** or **DOWN(-)** button to change the year.

Press **MODE** again. The day (D) and month (M) symbols will flash. The unit provides an option that allows either the day or the month to be indicated first. Using the **UP(+)** or **DOWN (-)** button, select whether the calendar reads as: Day/Month; or Month/Day.

Press **MODE** button and the month will flash. Enter the appropriate month using the **UP(+)** or **DOWN(-)** button.

Press **MODE** button and the day settings will flash. Enter the appropriate day using the **UP(+)** or **DOWN(-)** button.

Press **MODE** again and the language setting will flash. Use the **UP(+)** or **DOWN(-)** button to select E for English, D for German, F for French, I for Italian or S for Spanish.

Press **MODE** to complete and exit the setting.

The weekday can be expressed as an abbreviation in five different languages. The languages and their selected abbreviations for each day of the week are shown in the language chart below.

Language	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
English	Mo	Tu	We	Th	Fr	Sa	Su
German	Mo	Di	Mi	Do	Fr	Sa	So
French	Lu	Ma	Me	Je	Ve	Sa	Di
Italy	Lu	Ma	Me	Gi	Ve	Sa	Do
Spanish	Lu	Ma	Mi	Ju	Vi	Sa	Do

HOW TO SET AND ACTIVATE THE ALARM

To set the Alarm

Press **[AL / ✻]** button to display the daily alarm time (the icon "AL" will be displayed)

Press **[AL / ✻]** and hold for three seconds, the value for the hour will flash.

Press **UP(+)** or **DOWN(-)** buttons to make changes to the alarm hour setting.

Press **[AL / ✻]** and the minute will flash. Enter the value for the minute by using **UP(+)** or **DOWN(-)** buttons.

Press **[AL / ✻]** to exit.

The alarm is automatically activated. The **ALARM ON** icon [ ] is visible and the alarm will activate at the specified time.

To deactivate the daily alarm function, press the **DOWN(-)** button when the alarm time is displayed. The **ALARM ON** icon will disappear and **[-:--]** will be displated. To activate, press the **UP (+)** button to display the alarm time again.

ALARM AND SNOOZE FUNCTION

When the daily alarm goes off alarm, the backlight will be on for five seconds and the **ALARM ON** icon will flash.

The alarm function has a built in crescendo type alarm system. Initially, the active alarm will have a gentle sound. The intensity will increase in three stages. Without interruption, the unit will alarm for two minutes.

To stop the alarm, press any button (expect **MEMORY** & **CHANNEL**). However, if the **[☼ ((SNOOZE)) ☼]** bar is pressed, the **SNOOZE** function will be triggered. The alarm will stop and the **ALARM ON** icon blinks for eight minutes. After that the alarm will go off again. To deactivate the **SNOOZE** function, press the **ALARM** button.

PRE-ALARM FUNCTION FOR CHANNEL 1 REMOTE SENSOR

The alarm function also has a pre-alarm feature which can alert the user before their preset alarm time if weather conditions changes. This pre-alarm function applies to Channel 1 Remote Sensor only.

To enable this function, first activate the alarm function. Then enter the Pre-Alarm mode by pressing the **ALARM** button twice. The “Pre-Al” icon will be displayed.

Press and hold the **ALARM** button for 3 seconds to set the operating time interval for this pre-alarm function. Use the UP or DOWN button to select from the 4 time-intervals: 15, 30, 45 or 60 minutes. Press the **ALARM** button to confirm and exit. The pre-alarm function will be enabled automatically which is indicated by the appearance of the **[✻]** symbol.

To disable this function, press the **DOWN** button in the Pre-Alarm mode. The **[✻]** symbol will disappear and **"-:--"** will appear to indicate disable of this function.

The pre-alarm will operate during the selected time interval before the daily alarm time. For example, if the daily alarm is set to go off at 7:00 am and the pre-alarm operating time interval is set to 45 minutes, the pre-alarm will start to operate at 6:15 am (45 minutes before 7:00 am).

During the pre-alarm operating period, if the temperature recorded at Channel 1 remote sensor falls to or below 2.0ºC, the pre-alarm will be triggered. The Pre-Alarm icon will flash and the backlight will be turned on for 5 seconds. An alarm sound will also go off for 2 minutes as that of the daily alarm and the snooze function will also be activated if the **[☼ ((SNOOZE)) ☼]** bar button is pressed.

913hg-e.p65 6 04/30/2002, 5:59 PM

Note: The daily alarm will NOT function until the next day if the pre-alarm has been triggered beforehand. Deactivation of the alarm function will disable the pre-alarm feature automatically.

CHECKING INDOOR AND REMOTE TEMPERATURES & HUMIDITIES

To display the indoor and outdoor temperature and humidity readings, press the **CHANNEL** button to toggle among the indoor, Channel 1, 2 and 3 displays.

The temperature can be shown in Centigrade (°C) or Fahrenheit (°F). Select the appropriate reading by using the °C/°F slide switch (located in the battery compartment). Slide the switch to °C for Centigrade or °F for Fahrenheit.

This unit has an auto-scan function that can sequentially display the indoor and remote readings.

To activate this function, press and hold the **CHANNEL** button for 3 seconds. To deactivate press the **CHANNEL** button again.

If the reading goes above or below the specified amounts, the display will show a flashing "HHH" or "LLL".

NOTE ON REMOTE READINGS

Once batteries are in place in the remote unit, it will start transmitting samplings at 40 second intervals.

If no signals are received when the remote sensor display is selected, "- - -" will be displayed. To force the main unit to search for remote sensor signals, press **MEMORY** and **CHANNEL** simultaneously.

If that fails, check that the remote sensor is still in place. Make sure the transmission is within range and the path is clear of obstacles and interference.

Repeat this procedure whenever you find discrepancies between the display on the main unit and the display on the remote sensor.

NOTE ON °C AND °F

The outdoor temperature display on the main unit is dominated by the selection on the °C/°F slide switch of the main unit. Whatever the display unit of the remote sensor is, it will only apply to the remote sensor itself and the temperature will be automatically converted to the chosen one of the main unit.

MAXIMUM AND MINIMUM TEMPERATURES & HUMIDITIES

The maximum and minimum recorded temperatures and humidities will be automatically stored in memory. To display them, press **MEMORY**. Press **MEMORY** again to alternate between the maximum, minimum and current readings. The respective **MAX** or **MIN** indicator will be displayed.

To clear the memory, press **MEMORY** and hold for three seconds. The maximum and minimum recorded readings will be erased. Subsequently, if you press **MEMORY** after the memory has been erased, the maximum and minimum readings will have the same values as the current ones.

913hg-e.p65 7 04/30/2002, 5:59 PM

TEMPERATURE & HUMIDITY TREND

The temperature and humidity trend indicator shows the trend of temperatures and humidities collected at that particular sensor. Three trends: rising, steady, and falling will be shown.

Arrow indicator			
Temperature Trend	Rising	Steady	Falling

Arrow indicator			
Humidity Trend	Rising	Steady	Falling

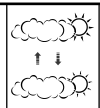
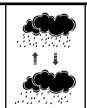
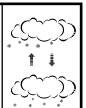
ATMOSPHERIC PRESSURE

The atmospheric pressure indicator in the weather forecast window uses arrows to indicate if the atmospheric pressure is increasing, remaining stable, or decreasing.

Arrow indicator			
Pressure Trend	Rising	Steady	Falling

WEATHER FORECAST

The unit is capable of detecting atmospheric pressure changes. Based on collected data, it can predict the weather for the forthcoming 12 to 24 hours. The effective range covers an area of 30 to 50 km.

Indicator displays on the unit					
Forecast	Sunny	Partly Cloudy	Cloudy	Raining	Snowy

NOTE:

1. The accuracy of a general pressure-based weather forecast is about 70% to 75%.
2. The weather forecasts from this unit are predictions that cover the next 12 to 24 hours. It may not necessarily reflect the current situation.
3. The “Sunny” icon, as applies to night time, implies clear weather.

COMFORT LEVEL INDICATORS

The comfort level indicators COMFORT, WET or DRY will tell you if the curent environment is comfortable, too wet or too dry.

The comfort indicator will appear on the display when the following conditions are satisfied:

Indicator displays on the unit	Temperature Range	Humidity Range	Shows that the Current Environment
COMFORT	20°C to 25°C (68°F to 77°F)	40%RH-70%RH	Ideal range for both relative humidity and temperature
WET	-5°C -+ 50°C (23°F - 122°F)	OVER-70%RH	Contains excess moisture.
DRY	-5°C -+ 50°C (23°F - 122°F)	Below 40%RH	Contains inadequate moisture
No Indicator	Less than 20°C(68°F) or More than 25°C (77°F)	40%RH to 70%RH	No comment

HOW TO CHECK THE BAROMETRIC PRESSURE

The current and historical barometric pressure is shown on the atmospheric pressure window.

For use at a higher altitudes, such as in the mountains, sea-level barometric pressure applies. In this case, press and hold **[HISTORY]** button to enter the altitude compensation setting mode. Use the **UP** (+) or **DOWN** (-) button to select from –100 to 2500 meters (whichever appropriate). Press **[HISTORY]** button to confirm and exit.

The atmospheric pressure can be displayed in mb/hPa or inHg. The pressure unit is selected on the atmospheric pressure slide switch inside the battery compartment.

If you want to check the pressure history for a particular hour during the past 24 hours, press the **[HISTORY]** button. Each press on the button will go back by an hour. Holding down the button will increase the value rapidly.

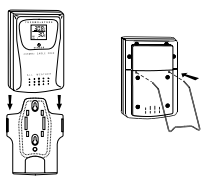
LOW BATTERY INDICATION

When it is time to replace batteries, the respective low battery indicator **[ ]** will show up when the corresponding channel is selected. The battery level of the main unit is shown on the Weather Forecast Window when it is running low.

HOW TO WALL MOUNT OR USE THE TABLE STAND (REMOTE UNIT)

The unit can be wall-mounted using its recessed screw holes or place on a flat surface using the fold out table stand.

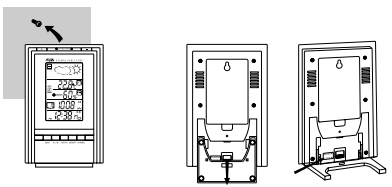
Wall-mount **Table stand**



HOW TO WALL MOUNT OR USE THE TABLE STAND (MAIN UNIT)

The unit can be wall-mounted using its recessed screw holes or placed on a flat surface using the collapsible table stand. Gently pull the table stand from it's collapsed position. Position the lock to secure the stand.

Wall-mount **Table stand**



HOW TO RESET THE UNIT

The **RESET** slot allows you to return all settings to factory values. Accessing the slot is required only when the unit is not operating in a favorable way such as in the rare case of a malfunction.

The **RESET** slot is located inside the battery compartment door. To use the button,

1. Lift open the battery compartment door.
2. Place a blunt stylus into the slot and press.
3. Replace the battery compartment door.

MAINTENANCE

When handled properly, this unit is engineered to give you years of satisfactory service. Here are a few product care instructions:

1. Do not immerse the unit in water. If the unit comes in contact with water, dry it immediately with a soft lint-free cloth.
2. Do not clean the unit with abrasive or corrosive materials. Abrasive cleaning agents may scratch the plastic parts and corrode the electronic circuit.
3. Do not subject the unit to excessive: force, shock, dust, temperature, or humidity. Such treatment may result in malfunction, a shorter electronic life span, damaged batteries, or distorted parts.
4. Do not tamper with the unit's internal components. Doing so will terminate the unit's warranty and may cause damage. The unit contains no user-serviceable parts.
5. Only use new batteries as specified in this instruction manual. Do not mix new and old batteries as the old batteries may leak.
6. Read this instruction manual thoroughly before operating the unit.

SPECIFICATIONS

Temperature Measurement

Main unit

Indoor Temperature measurement

Proposed operating range	: -5.0°C to +50.0°C (23.0°F to 122.0°F)
Temperature resolution	: 0.1°C (0.2°F)

Relative Humidity measurement

Measuring Range	: 25% RH to 95% RH at 25°C (77°F)
Resolution	: 1% RH

Remote unit

Temperature measurement

Proposed operating range	: -20.0°C to +60.0°C (-4.0°F to 140.0°F)
Temperature resolution	: 0.1°C (0.2°F)
RF Transmission Frequency	: 433 MHz
No. of Remote unit	: Up to 3 units
RF Transmission Range	: 30 meters
Temperature sensing cycle	: around 40 seconds

Relative Humidity measurement

Measuring Range	: 25 to 95%RH at 25°C (77°F)
Resolution of Humidity	: 1% RH

Barometric Pressure measurement

Pressure measuring range	: 795 to 1050mb / hPa (23.48 to 31.01 inHg)

- **Power**

Main unit	: use four (4) UM-3 or "AA" 1.5V batteries
Remote sensing unit	: use two (2) UM-4 or "AAA" 1.5V batteries

- **Weight**

Main unit	: 306 gm (without battery)
Remote sensing unit	: 63 gm (without battery)

- **Dimensions**

Main unit	: 170(L) x 110(W) x 34(T) mm
Remote sensing unit	: 92(L) x 60(W) x 20(T) mm

CAUTION

— The content of this manual is subject to change without further notice.

— Due to printing limitation, the displays shown in this manual may differ from the actual display.

— The contents of this manual may not be reproduced without the permission of the manufacturer.

913hg-e.p65 11 04/30/2002, 6:00 PM

EC-DECLARATION OF CONFORMITY

This product contains the approved transmitter module **TX 01** and complies with the essential requirements of Article 3 of the R&TTE 1999/5/EC Directives, if used for its intended use and that the following standard(s) has/have been applied:

Efficient use of radio frequency spectrum

(Article 3.2 of the R&TTE Directive)

applied standard(s) **EN 300 220-1(2,3):1997**

Electromagnetic compatibility

(Article 3.1.b of the R&TTE Directive)

applied standard(s) **ETS 300 683:1997**

Safety of information technology equipment

(Article 3.1.a of the R&TTE directive)

applied standard(s) **EN 60950:1997**

Additional information:

The product therefore conforms with the Low Voltage Directive 73/23/EC, the EMC Directive 89/336/EC and R&TTE Directive 1999/5/EC (appendix II) and carries the respective CE marking.

VS-Villingen / Germany August 2001

Gerhard Preis

R&TTE Representative of manufacturer

CE 0682 !

RTTE Compliant Countries :

All EC countries, Switzerland (CH)
And Norway (N)

913hg-e.p65 12 04/30/2002, 6:00 PM